

**Notice of Allowability**

Application No.

10/047,253

Examiner

Yong D. Pak

Applicant(s)

COPE ET AL.

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 2/26/2007.
2. ☒ The allowed claim(s) is/are 32,33,36-37,41-50,52-57,74,75,77 and 78.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 26, 2007 has been entered.

Claims 32-33, 36-37, 41-57, 74-75 and 77-78 are pending and are under consideration.

### ***Response to Arguments***

Applicant's amendment and arguments filed on February 26, 2007, have been fully considered and are deemed to be persuasive to overcome the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Haile on May 29, 2007.

The application has been amended as follows:

**IN THE CLAIMS:**

Replace claims 32, 33, 42, 45, 47-48, 77 and 78 with the following claims.

A) --32. (Currently amended) A method of identifying an agent that affects isopeptidase activity of an Rpn11 polypeptide having the amino acid sequence of SEQ ID NO:23 or 24 comprising:

incubating a test agent with the Rpn11 polypeptide in the presence of a modifier protein and a target protein, wherein the Rpn11 polypeptide has isopeptidase activity and deconjugates the modifier protein from [[a]]the target protein; and

determining the isopeptidase activity of the polypeptide-by measuring deconjugation of the modifier protein from the target protein in the presence and absence of the test agent, wherein a difference in the isopeptidase activity in the presence versus the absence of the test agent is indicative of an agent that affects isopeptidase activity of the Rpn11 polypeptide, wherein the modifier protein is a ubiquitin or a ubiquitin-like modifier protein.--

B) --33. (Currently amended) The method of claim 32, wherein the Rpn11 polypeptide has a JAMM domain consisting essentially of the amino acid sequence of GW(Y/I)H(S/T)HPXXXXXXSXXD (SEQ ID NO. 2), wherein G is glycine, W is tryptophan, Y is tyrosine, I is isoleucine, H is histidine, S is serine, T is threonine, P is proline, D is aspartate, X is any amino acid, Y/I is either Y or I, and S/T is either S or T.--

C) --42. (Currently amended) The method of claim 32, wherein the target protein or modifier protein, or both, comprise a detectable label.--

D) --45. (Currently amended) The method of claim 43, wherein the label has the activity of peroxidase, alkaline phosphatase, or luciferase.--

E) --47. (Currently amended) The method of claim 32, wherein Rpn11 is a polypeptide of a 26S proteasome.--

F) --48. (Currently amended) The method of claim 32, wherein Rpn11 is a polypeptide of a 26S proteasome and the modifier protein is an ubiquitin.--

G) --77. (Currently amended) The method of claim 78, wherein the polypeptide comprises a JAMM domain comprises AMSH1 and/or AMSH2.--

H) --78. (Currently amended) A method of identifying an agent that affects isopeptidase activity of an AMSH polypeptide having the amino acid sequence of SEQ ID NO:7 comprising:

incubating a test agent with the AMSH polypeptide in the presence of a modifier protein and a target protein, wherein the AMSH polypeptide isopeptidase activity and deconjugates the modifier protein from the target protein; and

determining the isopeptidase activity of the polypeptide by measuring deconjugation of the modifier protein from the target protein in the presence and absence of the test agent, wherein a difference in the isopeptidase activity in the presence versus the absence of the test agent is indicative of an agent that affects isopeptidase activity of the AMSH polypeptide, wherein the modifier protein is a ubiquitin or a ubiquitin-like modifier protein.--

I) Cancel claim 51.

***Allowable Subject Matter***

Claims 32-33, 36-37, 41-50, 52-57, 74-75 and 77-78 are allowed.

Although the Rpn11 polypeptide having the amino acid sequence of SEQ ID NO:23 or 24 and the AMSH polypeptide having the amino acid sequence of SEQ DI NO:7 were known in the art, prior art does not disclose said polypeptides having isopeptidase activity.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yong Pak whose telephone number is 571-272-0935. The examiner can normally be reached 6:30 A.M. to 5:00 P.M. Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

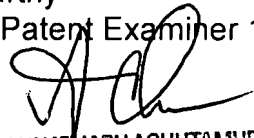
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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